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ERYSIPELAS OF THE EYELIDS SPREADING EXTENSIVELY TO FACE AND SCALP. ORBITAL CELLULITIS. RECOVERY WITHOUT IMPAIRMENT OF VISION.

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Frequently the eyelids are involved in an erysipelatous attack by an invasion of the disease which has originated in the neighboring facial area; more rarely the inflammation begins in the tissues of the lids themselves. The chief interest which attaches to facial erysipelas from the ophthalmological standpoint is the blindness which has followed the attack in a number of cases, in all of which, according to Knapp,[1] orbital cellulitis was a complicating symptom.

The following case of severe facial erysipelas, beginning in the eyelids and probably associated with orbital cellulitis, and yet without any disturbance of vision or decided changes in the eye-grounds, includes several points of interest.

Charles Dolan, aged twenty-seven, an American by birth, was admitted to the wards of the Philadelphia Hospital, January 24, 1890. His father died at the age of forty-two, of phthisis; his mother from the effects of an abdominal operation; one brother is living and healthy. The patient is single, and with the exception of rheumatism contracted several years ago, has been free from any severe illness during his entire life. There was no history of injury. He acknowledged gonorrhœa, but denied syphilis. His occupation was a street car driver, and there was no other relation of his work to his illness than the necessary exposure which such an occupation entailed. He used tobacco moderately and also alcohol. There were no sexual excesses. Six weeks before admission, the patient began to complain of severe general headache, most marked in the temples, and aggravated by moving the head and eyes from side to side. One week later diplopia appeared; according to his statement the heads of the horses were doubled and stood side by side. The muscles of the left eye were apparently those affected, inasmuch as he always closed this eye in order to avoid the effects of the double vision. There was at this time no swelling of the face and no appearance of external inflammation about the

[1] Archives of Ophthalmology, Vol. XIII, 1884.

eyes. He continued his occupation and succeeded in driving correctly by keeping the left eye closed. Two weeks before he sought admission, the headaches became so severe that he was unable to continue his work, and sometime during the night of Tuesday, January 23, after hours of most intense suffering, his eyelids began to close and by morning were swollen tight shut.

Condition on admission.—The skin of the forehead was œdematous, both eyes closed, the lids swollen, bulged forward, and of a dark-red erysipelatous color. No conjunctival discharge, but the bulbar conjunctiva chemotic. The eyes moved with difficulty and pressure produced pain, the cornea was clear, and several superficial abscesses appeared in the skin of the left eyelid, which, together with the face on that side, was more swollen, especially over the antrum and down on the neck, than similar areas upon the opposite side. The tissues over the nose and between the eyes were puffed up and boggy, giving the man a typical "frog-face" appearance. There was no fluctuation at any point over the swollen surface. There

were no carious teeth and no disease of the naso-pharynx. The tongue was heavily coated; the appetite impaired, the bowels constipated. The lungs were free from râles, the respiration 20 per minute. The heart was regular in its beat, pulse 72, and no increase in arterial tension. The general intelligence was perfect, the sleep being broken only by the intense headache which had never ceased since its original onset. The pupils reacted to light. The vision, as far as it was possible to obtain this, appeared to be unaffected. The swelling of the conjunctival tissues was so great, however, that no complete ophthalmoscopic examination was possible. The urine was of a reddish-yellow color, had a specific gravity of 1018, acid in reaction, free from albumin and sugar, and contained a small sediment composed of leucocytes

and epithelial cells. No casts were present. The patient was placed upon full doses of quinine and iron, and locally frequently changed compresses soaked in a warm solution of bichloride of mercury—grain 1 to the pint—were ordered. On the 27th, the temperature, which on admission had been 101, rose to 104.

The following is the Record of Pulse, Respiration and Temperature from January 24 to February 12 :—

Date.	Time.	Pulse.	Respiration.	Temperature.
January 24	Morning	108	30	101
	Evening	72	20	100
January 25	Morning	70	24	100.8
	Evening	72	18	100.4
January 26	Morning	72	16	100
	Evening	80	18	99.6
January 27	Morning	84	28	104
	Evening	90	22	102.8
January 28	Morning	86	26	102.4
	Evening	86	20	101.8
January 29	Morning	88	24	100.6
	Evening	86	24	100
January 30	Morning	68	16	98.6
	Evening	68	20	99.2
January 31	Morning	72	20	99.4
	Evening	66	18	98
February 1	Morning	72	20	98.6
	Evening	74	18	99.4
February 2	Morning	68	16	98.6
	Evening	82	18	99.2
February 3	Morning	72	16	100
	Evening	76	18	98
February 4	Morning	68	19	98 2
	Evening	74	18	99.2
February 5	Morning	70	20	98.6
	Evening	76	20	98 2
February 6	Morning	76	22	98.8
	Evening	84	22	99.2
February 7	Morning	70	18	98
	Evening	76	20	98.6
February 8	Morning	82	20	97.8
	Evening	84	20	98.4
February 9	Morning	70	18	99.6
	Evening	70	18	100.6
February 10	Morning	90	20	99.4
	Evening	88	18	99
February 11	Morning	90	18	98.4
	Evening	86	20	98 4
February 12	Morning	80	18	98.4
	Evening	74	20	98.4
February 13	Morning	.....	...	98.4
	Evening	.....	...	97.8

The patient was etherized and deep incisions made along the margin of the orbit of the left eye, above and below, and a similar incision in the lower lid of the right eye. The escape of pus was very free, not less than eight ounces being evacuated. This seemingly came from the infiltrated tissues all around, and in order to secure drainage, counter incisions were made in the dependent portions of the left side of

the face. A director was pushed into each orbit, and from the orbit of the right side a small quantity of pus escaped. Great relief followed the incisions, which were daily syringed with the bichloride solution. Three days later the morning temperature was normal, and it never rose again above 100 until the 9th of February, when a large abscess, which formed over the left ear and was confined by the temporal fascia, was opened by my colleague, Dr. George M. Gould, who was at this time in charge of the wards. Subsequently a smaller abscess in the neighborhood of the original incision at the left eye appeared and was evacuated. The treatment during the entire period was quinine, tincture of the chloride of iron and whiskey. At the height of the attack the bogginess of the tissues, as well as the brawny flush, extended very high up in the scalp, completely over the face, and as far down the left side of the neck as the sterno-clavicular articulation. The amount of pus evacuted in the second incision fully equaled, if it did not exceed, that which was obtained at the original operation.

As soon as the swelling had sufficiently subsided to render ophthalmoscopic examination possible, this was made by Dr. Gould, who reported practically negative findings. The vision was normal. Two months later the vision of each eye was $\frac{20}{XX}$. There was no paralysis of any external eye muscle. The pupil reactions were normal. In the right eye there was an oval disc, the nasal edges veiled and the central lymph sheaths full ; the veins full, dark in color, and slightly tortuous ; no macular changes. In the left eye there was an oval disc, a small physiological cup, and a similar condition of the retinal veins. Lying upon and overlapping the outer margin of the optic disc on this side there was a small linear hemorrhage, apparently such as might be produced by the rupture of a capillary. This had a fresh appearance and was not present at the time that Dr. Gould examined the patient shortly after the subsidence of the erysipelatous swelling.

REMARKS.

The character of the patient's occupation, a car driver, readily supplies exposure to inclement weather as the exciting cause of the erysipelas. The presence of intense headache six weeks before the appearance of any flush upon the face or eyelids, and diplopia, with pain on moving the head and eyes, five weeks before the onset of visible external inflammation, seem to point to the existence of orbital cellulitis in the earliest stage of this process. It should be remembered, however, in this connection, that the patient had in times past suffered from rheumatism, and these symptoms may be explained on the supposition that the "headache" was really the pain of a rheumatic affection of the fibrous tissue of the scalp, and the diplopia the result of a rheumatic palsy of the external rectus. When the erysipelas did appear this was manifest first in the tissue of the lids, and from this point spread to the face, scalp and neck. The incisions revealed the

pus chiefly in the connective tissue of these regions, but apparently also in the right orbit; at least pus escaped after the introduction of a grooved director.

Facial erysipelas associated with orbital cellulitis renders the prognosis to life and sight quite uncertain, as is evidenced by the following summary of thirty-five cases collected by Knapp (loc. cit.):—

Death, when one eye only was affected, in	4 cases.
Death, when both eyes were affected, in	6 "
Recovery in	25 "
Of these one eye only affected and permanently blind in	12 cases.
Both eyes affected and permanently blind in	4 "
Both eyes affected; sight restored in one, in the other lost in	3 "
Both eyes temporarily blind; restoration of sight incomplete in both, in	3 "
One eye affected, amblyopic but not blind; restoration of sight complete in	1 "
Both eyes affected, amblyopic; restoration of sight complete in	2 "

From this table it is manifest that the mortality is twenty-nine per cent. in cases of orbital cellulitis from erysipelas. The condition of the eye-sight in the surviving cases, according to the same author, was as follows:—

Blindness in both eyes occurred in	16 per cent.
Blindness in one eye occurred in	60 "
Incomplete recovery of sight occurred in	12 "
Complete recovery of sight occurred in	12 "

If it is assumed that orbital cellulitis was present in this case, it is not a little remarkable there was no impairment of vision and no change in the eye-grounds. It is probable that this escape was due to the fact that at no time was there sufficient compression of the central vessels of the retina in the orbit, which Knapp has shown to be the cause of the intra-ocular changes, to produce stoppage of the circulation and œdema and exudation into the retina. It is interesting to note the presence of a small linear hemorrhage several months after the affection had entirely subsided, a hemorrhage, moreover, which was apparently not present during the stage of convalescence in this patient.

Although impairment of vision and changes in the eye-ground from orbital cellulitis appear usually during the inflammatory

stage of the erysipelas, they have been seen also in the period of convalescence. This small hemorrhage and the somewhat enlarged and tortuous retinal veins, are too far removed in point of time from either the onset, height or stage of convalescence of the erysipelas attack to be explained upon these grounds. There is absolutely nothing now in this patient, except a slight scar at the point of incision upon the cheek and lower lid of the left eye, to indicate that he had ever been through an attack of erysipelas that for some days threatened his life.

The points of interest in the case seem briefly to be these: A period of several weeks with symptoms pointing to cellulitis of the orbit, or else to rheumatism of the scalp and rheumatic palsy of the external rectus; erysipelas at the end of this time having its point of origin in the tissue of the eyelids rapidly spreading, and associated, as far as this was ascertainable, with a low grade of cellulitis of the orbit; entire recovery of the patient without at any time disturbance of vision, and with no changes in the interior of his eye, except a small linear hemorrhage, discovered so long after the attack that its origin can not be traced.